Permit to Construct No. P-2008.0013

Public Comment

Western Aircraft Inc.

Boise, Idaho

Facility ID No. 001- 00220

April 15, 2008

Almer Casile

Permit Writer

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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Acronyms, Units, and Chemical Nomenclature

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
gr	grain (1 lb = 7,000 grains)
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
gpm	gallons per minute
HAPs	Hazardous Air Pollutants
hp	horsepower
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
lb/hr	pound per hour
m	meter(s)
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NSPS	New Source Performance Standards
PC	permit condition
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	Synthetic Minor
SO_2	sulfur dioxide
SO_x	sulfur oxides
T/yr	tons per year
$\mu g/m^3$	micrograms per cubic meter
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. FACILITY INFORMATION

1.1 Facility Description

Aircraft Interior refurbishment (refinishing cabinets, recovering walls and headliners with fabric)

1.2 Permitting History

This permitting action involves the issuance of the initial PTC for this facility.

2. APPLICATION SCOPE

This permitting action involves installation of a two station spray booth and a prep area.

2.1 Application Chronology

February 12, 2008	DEQ received application and application fee.
March 11, 2008	DEQ determined application complete.

3. TECHNICAL ANALYSIS

Table 3.1 EMISSION UNIT AND CONTROL DEVICE INFORMATION

Emissions Unit(s) / Process(es)	Emissions Control Device	Emissions Point
Spray Booth (Two-Station)	Two Stage Filter System. Stage 1 Filter with Control Efficiency of 96.5% Stage 2 Filter with Control Efficiency of 99.1%	Stack 1
	Two Stage Filter System. Stage 1 Filter with Control Efficiency of 96.5% Stage 2 Filter with Control Efficiency of 99.1%	Stack 2

3.2 Emissions Inventory

An emission inventory was submitted by the permittee. The emission estimates contained in Table 3.2 are based on the worst case PM_{10}, VOC and HAP emissions for all coating listed in the application. All emission rates are based on 654 hours/year of operation. The HAP emission rate in Table 3.2 represents worst case emission rate for material sprayed by one spray gun for 654 hours per 12 consecutive month period. The worst case emission rate for any individual HAP contained in material sprayed by one spray gun for 654 hours per 12 consecutive month period was 3.09 T/yr. PM_{10} emission estimates were determined using the spray booth filter efficiency and spray gun application efficiency of 99% and 65%, respectively. Sample calculations and the applicant's emission inventory are contained in Appendix B.

Table 3.2 EMISSIONS ESTIMATES

Emissions Unit	PM_{10}		VOC	HAP
	lb/hr	T/yr	T/yr	T/yr
Point Sources Affected by the Permitting Action				
Spray Booth	0.03	0.01	6.72	3.38
Total, Point Sources	0.03	0.01	6.72	3.38

The emission estimates contained in Table 3.2 are based on the worst case TAP emissions for all coatings listed in the application. All emission rates are based on 654 hours of operation per year.

Table 3.3 TAP AND HAP EMISSIONS SUMMARY

TAPS	HAPS	Screen Level	24-hour Average[a]	Annual Average[a]
		lb/hr	lb/hr	lb/hr
Butyl Acetate		47.3	6.3	N/A
Acetone		119	5.6	N/A
Methyl Ethyl Ketone		39.3	2.43	N/A
Hexane	Hexane	12	5.54	N/A
Toluene	Toluene	25	9.46	N/A
Xylene	Xylene	29	1.63	N/A
Ethyl Benzene	Ethyl Benzene	29	2.47	N/A

a. 24-hour average only applies to non-carcinogenic TAPs. Annual average only applies to carcinogenic TAPs.
b. NA = not applicable.

Ambient Air Quality Impact Analysis

The estimated emissions rate for PM_{10} is below the modeling threshold; therefore, modeling is not required in accordance with State of Idaho Air Quality Modeling Guidance DEQ Publication, December 2002. In accordance with IDAPA 58.01.01.210.05, the uncontrolled emission rates for the pollutants listed in Table 3.3 is less than or equal to the applicable screening emission level and, therefore, no further procedures for demonstrating preconstruction compliance were required.

4. REGULATORY REVIEW

4.1 Attainment Designation (40 CFR 81.313)

The facility is located in Ada County which is designated as attainment or unclassifiable for PM_{10}, $PM_{2.5}$, CO, NO_2, SO_X, and Ozone. Reference 40 CFR 81.313.

4.2 Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201.....Permit to Construct Required

The facility's proposed project does not meet the permit to construct exemption criteria contained in Sections 220 through 223 of the Rules. Therefore, a PTC is required.

IDAPA 58.01.01.203.....Permit Requirements for New and Modified Stationary Sources

The facility has shown to the satisfaction of DEQ that it will comply with all applicable emissions standards, ambient air quality standards, and toxic increments.

IDAPA 58.01.01.210.....Demonstration of Preconstruction Compliance with Toxic Standards

The facility has demonstrated preconstruction compliance for all TAPs identified in the permit application.

IDAPA 58.01.01.224.....Permit to Construct Application Fee

The facility satisfied the PTC application fee requirement by submitting a fee of $1,000.00 on July 31, 2006.

IDAPA 58.01.01.225.....Permit to Construct Processing Fee

The total emissions from the proposed new facility are between 10 and 100 T/yr; therefore, the associated processing fee is $5,000.00.

IDAPA 58.01.01.585.....Toxic Air Pollutants Non-Carcinogenic Increments.

The facility has demonstrated preconstruction compliance for all TAPs identified in the permit application. Any material used in the spray booth and not specifically listed in the application. shall comply with this requirement.

IDAPA 58.01.01.586.....Toxic Air Pollutants Carcinogenic Increments.

The facility has demonstrated preconstruction compliance for all TAPs identified in the permit application. Any material used in the spray booth, and not specifically listed in the application, shall comply with this requirement.

4.3 Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.312.....Duty To Apply

The facility is not a Tier I source in accordance with IDAPA 58.01.01.006.113. Therefore, the requirements of IDAPA 58.01.01.312 do not apply.

4.4 PSD Classification (40 CFR 52.21)

40 CFR 52.21…… .....Prevention of Significant Deterioration Of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source, not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52.21(b). Therefore, in accordance with 40 CFR 52.21(a)(2), the PSD requirements do not apply.

4.5 NSPS Applicability (40 CFR 60)

No NSPSs apply to this facility.

4.6 NESHAP Applicability (40 CFR 61)

40 CFR 63, Subpart GG does not apply to this facility because this permitting action establishes the facility's potential to emit below major source thresholds.

4.7 MACT Applicability (40 CFR 63)

No MACT apply to this facility because it is a minor source of HAPs.

4.8 CAM Applicability (40 CFR 64)

40 CFR 64 does not apply to this facility because it is not required to obtain a part 70 or 71 permit.

4.9 Permit Conditions Review

Permit Condition 2.3 establishes the annual emission limits for VOC, individual HAPs, and any combination of HAPs. Emission limits for individual HAPs, and any combination of HAPs were included into the permit to clearly establish the PTE for those pollutants, and clearly show that facility is below major source thresholds.

Permit Condition 2.4 establishes the opacity requirements for the 2 stacks associated with the paint booth. Permit Condition 2.5 established the odor requirements for the permittee. Permit Conditions 2.11, 2.14, and 2.15 contain the monitoring, recordkeeping and reporting requirements necessary to demonstrate compliance with the opacity requirements of Permit Condition 2.5.

Permit Condition 2.6 limits the hours of operation of the spray booth. Permit Condition 2.7 requires the permittee to only operate 1 spray gun at a time. Permit Condition 2.6 and 2.7 have been established to limit the PTE of VOCs, and individual and any combination of HAPS to the levels in Permit Condition 2.3. Permit Conditions 2.8 through 2.10 and 2.12 through 2.15 establish the operating, monitoring, recordkeeping and reporting requirements necessary to demonstrate compliance with Permit Condition 2.3

5. PERMIT FEES

Table 5.1 lists the processing fee associated with this permitting action. The facility is subject to a processing fee of $5000.00 because its permitted emissions are 10.11 TPY. Refer to the chronology for fee receipt dates.

Table 5.1 PTC PROCESSING FEE TABLE

Emissions Inventory			
Pollutant	**Annual Emissions Increase (T/yr)**	**Annual Emissions Reduction (T/yr)**	**Annual Emissions Change (T/yr)**
NO_X	0.0	0	0.0
SO_2	0.0	0	0.0
CO	0.0	0	0.0
PM_{10}	0.01	0	0.01
VOC	6.72	0	6.72
HAPS	3.38	0	3.38
Total:	10.11	0	10.11
Fee Due	**$5000.00**		

6. PUBLIC COMMENT

An opportunity for public comment period on the PTC application was provided from February 22, 2008 to March 10, 2008 in accordance with IDAPA 58.01.01.209.01.c. During this time, there was a request for a public comment period on DEQ's proposed action.

APPENDIX A – AIRS INFORMATION

AIRS/AFS[a] FACILITY-WIDE CLASSIFICATION[b] DATA ENTRY FORM

Permittee/Facility Name: **Western Aircraft Inc.**
Facility Location: **Boise**
AIRS Number: **001- 00220**

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO_2								U
NO_x								U
CO								U
PM_{10}		B					B	U
PT (Particulate)		B						
VOC		B					B	U
THAP (Total HAPs)		B						
			APPLICABLE SUBPART					

[a] Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

[b] AIRS/AFS Classification Codes:

A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class "A" is applied to each pollutant which is at or above the 10 T/yr threshold, **or** each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.

SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.

B = Actual and potential emissions below all applicable major source thresholds.

C = Class is unknown.

ND = Major source thresholds are not defined (e.g., radionuclides).

Appendix B – Emissions Inventory

Chemical Calculations	* = not on Toxic Air Pollutant 585 or 586 List	% of ingredient	x weight of chemical	x Rated capacity of spray gun in gal/hr	Emission Level	Below Regulatory Concern (10% of Allowable EL)	Total Emissions in tons per year	Hours of actual spraying of this chemical in hours/per year	Actual Total Emissions	
3M 1357L Contact Adhesive (6.672 lbs/gal)										
	*Petroleum Distillate									
	Acetone	0.30	6.67	2.80	5.60	Yes - EL is 119	24.55	654	1.83	
	Hexane	0.15	6.67	2.80	2.80	No - EL is 12	12.27	654	0.92	
	*Polychloroprene				0.00			654	0.00	
	*Magnesium Resinate				0.00			654	0.00	
	Methyl Ethyl Ketone	0.13	6.67	2.80	2.43	Yes - EL is 39.3	10.63	654	0.79	
	Toluene	0.07	6.67	2.80	1.31	Yes - EL is 25	5.73	654	0.43	
										1.34
Permacron MS Clearcoat 8180 (8.02 lbs/gal)								654	0.00	
	*Acrylic Resin				0.00			654	0.00	
	Butyl acetate	0.03	8.02	2.80	0.67	Yes - EL is 47.3	2.95	654	0.22	
	*Ethyl 3-ethoxy propionate				0.00			654	0.00	
	Ethylbenzene	0.11	8.02	2.80	2.47	Yes - EL is 29	10.82	654	0.81	
	*Ethylene glycol monobutyl acetate				0.00			654	0.00	
										0.81
Permasolid HS Hardener 3309 Extra Fast (8.33 lb/gal)					0.00				0.00	
	*1,2,4-trimethyl benzene				0.00			654	0.00	
	*1,3,5-trimethyl benzene				0.00			654	0.00	
	*Aliphatic polyisocyanate resin				0.00			654	0.00	
	*Armomatic hydrocarbon-B				0.00			654	0.00	
	Butyl acetate	0.27	8.33	2.80	6.30	No - EL is 47.3	27.58	654	2.06	
	Ethylbenzene	0.02	8.33	2.80	0.47	Yes - EL is 29	2.04	654	0.15	
	*Propylene glycol monomethyl ether acetate				0.00			654	0.00	
	Xylene	0.07	8.33	2.80	1.63	Yes - EL is 29	7.15	654	0.53	
										0.69
Permasolid HS Hardener 3307 Express (8.24 lb/gal)									0.00	
	*Aliphatic polyisocyanate resin				0.00			654	0.00	
	*Armomatic hydrocarbon-B				0.00			654	0.00	
	Butyl acetate	0.00	8.24	2.80	0.00			654	0.00	
	Ethylbenzene	0.01	8.24	2.80	0.18	Yes - EL is 29	0.81	654	0.06	

Chemical Calculations	* = not on Toxic Air Pollutant 585 or 586 List	% of ingredient	x weight of chemical	x Rated capacity of spray gun in gal/hr	Emission Level	Below Regulatory Concern (10% of Allowable EL)	Total Emissions in tons per year	Hours of actual spraying of this chemical in hours/per year	Actual Total Emissions	
	*Propylene glycol monomethyl ether acetate				0.00			654	0.00	
	Toluene	0.41	8.24	2.80	9.46	No - EL is 25	41.43	654	3.09	
	Xylene	0.03	8.24	2.80	0.69	Yes - EL is 29	3.03	654	0.23	
					0.00					3.38
Permasolid HS Hardener 3310 Fast (8.33 lbs/gal)					0.00				0.00	
	*1,2,4-trimethyl benzene				0.00			654	0.00	
	*1,3,5-trimethyl benzene				0.00			654	0.00	
	*Aliphatic polyisocyanate resin				0.00			654	0.00	
	*Armomatic hydrocarbon-B				0.00			654	0.00	
	Butyl acetate	0.27	8.33	2.80	6.30	No- EL is 47.3	27.58	654	2.06	
	Ethylbenzene	0.02	8.33	2.80	0.47	Yes - EL is 29	2.04	654	0.15	
	*Propylene glycol monomethyl ether acetate				0.00			654	0.00	
	Xylene	0.07	8.33	2.80	1.63	Yes - EL is 29	7.15	654	0.53	
					0.00					0.69
Permacron MS Dura Plus 8580 Reducer/Solvent (7.34 lbs/gal)					0.00				0.00	
	Butyl acetate	0.94	7.34	2.80	19.32	No - EL is 47.3	84.62	654	6.32	
	Ethylbenzene	0.02	7.34	2.80	0.31	Yes - EL is 29	1.35	654	0.10	
	Xylene	0.05	7.34	2.80	1.03	Yes - EL is 29	4.50	654	0.34	
					0.00					0.44
Hybond 36 Adhesive/Solvent (6.6 lbs.gal)					0.00			654	0	
	Toluene	0.2	6.6	2.8	3.70	No - EL is 25	16.19	654	1.21	
	Hexane	0.3	6.6	2.8	5.54	No - EL is 12	24.28	654	1.81	
	*Hexane Isomers				0.00			654	0.00	
	*Methylcyclopethane				0.00			654	0.00	
	Acetone	0.22	6.6	2.8	4.07	Yes - EL is 119	17.81	654	1.33	
										3.02

				Total	24.97
Total Hexane	8.34	Total emissions in tons per year	334.52	Total Hexane	0.92
Total Toluene	14.47			Total Toluene	4.73
Total Butyl Acetate	32.59			Total Butyl Acetate	10.66
Total Xylene	4.98			Total Xylene	1.63

Chemical Calculations	* = not on Toxic Air Pollutant 585 or 586 List	% of ingredient	x weight of chemical	x Rated capacity of spray gun in gal/hr	Emission Level	Below Regulatory Concern (10% of Allowable EL)	Total Emissions in tons per year	Hours of actual spraying of this chemical in hours/per year	Actual Total Emissions
				Total Acetone	9.67			Total Acetone	3.16
				Total Ethyl Benzene	3.9			Total Ethyl Benzene	1.27
								Total HAPs	8.55

Above totals represent emission estimates for <u>all chemicals sprayed for 654 hours.</u>

Emission Level (lb/hr) = % of ingredient (%) * % weight of chemical * rated capacity of spray gun (gal/hr)

Total Emissions (T/yr) = Emission Level (lb/hr) * 8760 hours operation per year
= represents uncontrolled annual emission rate

Actual Total Emission (T/yr) = Emission Level (lb/hr) * Hours of Actual Spraying of this chemical (hr/yr)
= represents emission rate at requested annual hours of operation limit of 654 hr/yr

Permasolid HS Hardener 3307 Express represents worst case annual HAP emission rate at 654 hrs/yr of operation.

Name/Item Number	Material Coated	Solid lb/gal.	* max rate of spray gun	* % spray gun efficiency	* % spray booth filter efficiency	* Hours of Operation	lbs/hour	TPY	MSDS Attached?
Spies Hecker Permacron MS Clear Coat 8180 (29581800)	Wood/Fiberglass	3.65	2.8	0.35	0.01	654	0.03577	0.01169679	Yes
Spies Hecker Permasolid HS Hardener 3309 Extra Fast (29333091)	Wood/Fiberglass	0.72	2.8	0.35	0.01	654	0.007056	0.00230731	Yes
Spies Hecker Permasolid HS Hardener 3307 Express (2923307)	Wood/Fiberglass	3.65	2.8	0.35	0.01	654	0.03577	0.01169679	Yes
Spies Hecker Permasolid HS Hardener 3310 Fast (29133106/29233100)	Wood/Fiberglass	0.72	2.8	0.35	0.01	654	0.007056	0.00230731	Yes
Spies Hecker Permacron MS Dura Plus 8580 (29585805/29185807)	Wood/Fiberglass	0.44	2.8	0.35	0.01	654	0.004312	0.00141002	Yes
3M Scotch-Grip 1357-L High Performance Contact Adhesive	Fabric/Plastic	0	2.8	0.35	0.01	654	0	0	Yes
Henkel Corp. Hybond 36 (J9831D102)	Fabric/Plastic	1.05	2.8	0.35	0.01	654	0.01029	0.00336483	Yes
					Total	4578	0.100254	0.03278306	

Above totals represent emission estimates for <u>all chemicals sprayed for 654 hours.</u>

lbs/hr = solid (lb/gal)*max rate of spray gun (gal/hr) * % spray gun efficiency (%) * % spray booth filter efficiency
TPY = lbs/hr * Hours of operation (hours per year) ÷ 2000 lbs/T

Name/Item Number	Material Coated	VOC Gal.	* max rate of spray gun	* Hours of Operation	Tons per Year	MSDS Attached?
Spies Hecker Permacron MS Clear Coat 8180 (29581800)	Wood/Fiberglass	4.33	2.8	654	3.96	Yes
Spies Hecker Permasolid HS Hardener 3309 Extra Fast (29333091)	Wood/Fiberglass	4.33	2.8	654	3.96	Yes
Spies Hecker Permasolid HS Hardener 3307 Express (2923307)	Wood/Fiberglass	4.3	2.8	654	3.94	Yes
Spies Hecker Permasolid HS Hardener 3310 Fast (29133106/29233100)	Wood/Fiberglass	4.33	2.8	654	3.96	Yes
Spies Hecker Permacron MS Dura Plus 8580 (29585805/29185807)	Wood/Fiberglass	7.34	2.8	654	6.72	Yes
3M Scotch-Grip 1357-L High Performance Contact Adhesive	Fabric/Plastic	4.08	2.8	654	3.74	Yes
Henkel Corp. Hybond 36 (J9831D102)	Fabric/Plastic	4.02	2.8	654	3.68	Yes
			Worst Case Total VOC		6.72	

Tons per Year = VOC Gal. (lbs/gal) * max rate of spray gun (gal/hr) * Hours of Operation (hrs/year)

Appendix C – Modeling Analysis

(Reserved)